

Application No.: 09/888,093

3

Docket No.: 249212013900

**AMENDMENTS TO THE CLAIMS**

Claim 1 (currently amended): An optical recording article for use in an information storage system, comprising:

a substrate in the form of a tape; ~~[[and]]~~

a magneto-optic~~[[al]]~~ recording material ~~disposed over the substrate; and~~

a reflective material between the substrate and the magneto-optic recording material.

Claim 2 (currently amended): The optical recording article of claim 1, wherein the magneto-optic recording material consists of a single alloy of two or more metals. ~~substrate has a thickness of less than about one millimeter.~~

Claim 3 (original): The article of claim 1, wherein the article comprises a flexible article.

Claim 4 (currently amended): The article of claim 1, wherein the magneto-optic recording material is sputter deposited. ~~article has an aspect ratio of at least about 1.5.~~

Claim 5 (original): The article of claim 1, wherein the substrate comprises a polymer.

Claim 6 (original): The article of claim 5, wherein the polymer is selected from a group consisting of polyethylenephthalates, polyimides, polyaramids and combinations thereof.

Claims 7-9 (canceled)

Claim 10 (currently amended): The article of claim 1, wherein the magneto-optic material comprises tellurium, terbium, iron, cobalt, and chromium ~~and combinations thereof.~~

Claim 11 (canceled)

sf-1911729

Application No.: 09/888,093

4

Docket No.: 249212013900

Claim 12 (original): The article of claim 1, further comprising a reel, wherein the substrate and the optical recording material form a tape that is at least partially wound around the reel.

Claims 13-15 (canceled)

Claim 16 (currently amended): The article of claim 1[[3]], wherein the thickness of the substrate is less than about 50 microns.

Claim 17 (currently amended): The article of claim 1[[3]], wherein the thickness of the substrate is less than about 10 microns.

Claim 18 (currently amended): The article of claim 1[[3]], wherein the thickness of the substrate is from about 2 microns to about 8 microns.

Claim 19 (currently amended): The article of claim 1[[3]], wherein the thickness of the substrate is from about 4 microns to about 6 microns.

Claim 20-33 (canceled)

Claim 34 (currently amended): The article of claim 3[[0]], wherein the article is flexible enough to be wound around a reel having a diameter greater than zero and [[of]] less than about one inch without substantial cracking of the article.

Claims 35-50 (canceled)

Claim 51 (currently amended): The article of claim 1[[44]], wherein the reflective layer comprises aluminum.

Claim 52 (original): The article of claim 51, wherein the reflective layer further comprises titanium.

sf-1911729

Application No.: 09/888,093

5

Docket No.: 249212013900

Claims 53-65 (canceled)

Claim 66 (withdrawn): A system, comprising:

a first reel;

a second reel; and

a tape, comprising;

a substrate; and

an optical recording material,

wherein the tape is at least partially wound around at least one reel selected from the group consisting of the first reel and the second reel.

Claim 67 (withdrawn): The system of claim 66, further comprising an energy source capable of writing information on the tape or erasing information from the tape.

Claim 68 (withdrawn): The system of claim 67, further comprising a sensor capable of reading information from the tape.

Claim 69 (withdrawn): The system of claim 66, further comprising a sensor capable of reading information from the tape.

Claim 70 (withdrawn): The system of claim 66, wherein the substrate has a thickness of less than about one millimeter.

Claim 71 (withdrawn): The system of claim 66, wherein the article comprises a flexible material.

Claim 72 (withdrawn): The system of claim 66, wherein the article has an aspect ratio of at least about 1.5.

sf-1911729

Application No.: 09/888,093

6

Docket No.: 249212013900

**Claim 73 (withdrawn):** The system of claim 66, wherein the substrate comprises a polymer.

**Claim 74 (withdrawn):** The system of claim 73, wherein the polymer is selected from the group consisting of polyethylenenaphthalates, polyimides, polyaramids and combinations thereof.

**Claim 75 (withdrawn):** The system of claim 66, wherein the optical recording material comprises an optical phase change material.

**Claim 76 (withdrawn):** The system of claim 75, wherein the optical phase change material comprises germanium, antimony, tellurium and combinations thereof.

**Claim 77 (withdrawn):** The system of claim 66, wherein the optical recording material comprises a magneto-optic material.

**Claim 78 (withdrawn):** The system of claim 77, wherein the magneto-optic material comprises tellurium, iron, cobalt and combinations thereof.

**Claim 79 (withdrawn):** The system of claim 66, wherein the optical recording material comprises a sputter deposited optical recording material.

**Claim 80 (withdrawn):** The system of claim 66, further comprising a reflective material between the substrate and the optical recording material.

**Claim 81 (withdrawn):** A method, comprising:  
sputter depositing an optical recording material on an article having a substrate in the shape of a tape.

**Claim 82 (withdrawn):** A method, comprising:  
sputter depositing an optical recording material on an article having a flexible substrate.

sf-1911729

Application No.: 09/888,093

7

Docket No.: 249212013900

Claim 83 (withdrawn): A method, comprising:

sputter depositing an optical recording material on a substrate with a thickness of less than about one millimeter.

Claim 84 (withdrawn): A method, comprising:

sputter depositing an optical recording material onto a reflective material, the reflective material being disposed over a substrate.

Claim 85 (withdrawn): A method, comprising:

writing information on a tape, the tape comprising a substrate and an optical recording material disposed over the substrate.

Claim 86 (withdrawn): The method of claim 85, wherein the information is written on the tape by heating a portion of the optical recording material.

Claim 87 (withdrawn): The method of claim 86, wherein heating includes irradiating the tape.

Claim 88 (withdrawn): The method of claim 85, further comprising erasing at least a portion of the information from the tape.

Claim 89 (withdrawn): The method of claim 88, wherein the information is erased from the tape by heating a portion of the optical recording material.

Claim 90 (withdrawn): The method of claim 88, wherein heating includes irradiating the tape.

Claim 91 (withdrawn): A method, comprising:

erasing information from a tape, the tape comprising a substrate and an optical recording material disposed over the substrate.

sf-1911729

Application No.: 09/888,093

8

Docket No.: 249212013900

Claim 92 (withdrawn): The method of claim 91, wherein the information is erased from the tape by heating a portion of the optical recording material.

Claim 93 (withdrawn): The method of claim 91, wherein heating includes irradiating the tape.

Claim 94 (currently amended): A data storage tape, comprising:

a substrate in the form of a tape; and

a data storage layer ~~disposed over the substrate~~, the data storage layer comprising a[[n]]

magneto-optic[[al]] recording material; and

a reflective material between the substrate and the data storage layer.

Claims 95-100 (canceled)

Claim 101 (new): An optical phase change tape, comprising, in this order:

a substrate comprising a polyaramid material;

a first dielectric layer comprising zinc sulfide and silicon oxide;

an-optical recording layer comprising germanium, antimony, and tellurium; and

a second dielectric layer comprising zinc sulfide and silicon oxide.

Claim 102 (new): The optical phase change tape of claim 101, wherein the optical recording layer is  $\text{Ge}_1\text{Sb}_1\text{Te}_{1.3}$ .

Claim 103 (new): The optical phase change tape of claim 101, wherein the optical recording layer is about 20 nanometers thick.

Claim 104 (new): The optical phase change tape of claim 101, wherein the substrate is about 4.4 microns thick.

sf-1911729

Application No.: 09/888,093

9

Docket No.: 249212013900

Claim 105 (new): The optical phase change tape of claim 101, wherein the reflective layer is about 40 nanometers thick.

Claim 106 (new): The optical phase change tape of claim 101, wherein the first dielectric layer is about 20 nanometers thick.

Claim 107 (new): The optical phase change tape of claim 101, wherein the second dielectric layer is about 80 nanometers thick.

Claim 108 (new): The optical phase change tape of claim 101, wherein the magneto-optic recording layer is about 80 nanometers thick.

Claim 109 (new): The optical phase change tape of claim 101, wherein the substrate is about 5.2 microns thick.

Claim 110 (new): The optical phase change tape of claim 101, wherein the substrate comprises a polyethylene naphthalate material.

Claim 111 (new): The optical phase change tape of claim 101, wherein the optical recording layer is  $\text{Ge}_1\text{Sb}_1\text{Te}_{2.3}$ .

Claim 112 (new): The optical phase change tape of claim 101, wherein the optical recording layer is a 50 nanometer thick layer of  $\text{Ge}_1\text{Sb}_1\text{Te}_{2.3}$ .

Claim 113 (new): The optical phase change tape of claim 101, wherein the reflective layer comprises titanium.

Claim 114 (new): The optical phase change tape of claim 113, wherein the reflective layer further comprises aluminum.

sf-1911729

Application No.: 09/888,093

10

Docket No.: 249212013900

Claim 115 (new): A magneto-optic tape comprising, in this order:

- a substrate comprising a polyaramid material;
- a first dielectric layer comprising silicon nitride;
- a magneto-optic recording layer comprising a single alloy of two or more metals; and
- a second dielectric layer comprising silicon nitride.

Claim 116 (new): The magneto-optic tape of claim 115, wherein the magneto-optic recording layer comprises terbium, iron, cobalt, and chromium.

Claim 117 (new): The magneto-optic tape of claim 115, wherein the substrate is about 4.4 microns thick.

Claim 118 (new): The magneto-optic tape of claim 115, wherein the first dielectric layer is about 20 nanometers thick.

Claim 119 (new): The magneto-optic tape of claim 115, wherein the second dielectric layer is about 80 nanometers thick.

Claim 120 (new): The magneto-optic tape of claim 115, wherein the magneto-optic recording layer is about 20 nanometers thick.

Claim 121 (new): The magneto-optic tape of claim 115, wherein the magneto-optic recording layer is about 25 nanometers thick.

Claim 122 (new): The magneto-optic tape of claim 115, wherein the magneto-optic layer is sputter-deposited.

sf-1911729